

CONSERVATORY OF MUSIC & DANCE

Meera Murali

Thesis submitted to the faculty of
Virginia Polytechnic Institute and State University
in partial fulfillment of the requirements for the degree of

Master of Architecture
In
Architecture

Scott Gartner (Committee Chair)
William Galloway
Paola Zellner Bassett

September 25 2015
Blacksburg, VA

Keywords: architecture, arts school, music dance conservatory, campus design,
tectonics, form, materiality, architectural detail

CONSERVATORY OF MUSIC & DANCE

Meera Murali

ABSTRACT

Like Art, Architecture has the potential to impact people. Art is often considered the process of consciously arranging elements in a way that appeals to the senses or emotions. Architecture can also be described similarly. However, the key difference between Art and Architecture is that while Art is pure personal expression, Architecture carries with it a certain accountability towards its immediate context and inhabitants. While a painting begins and ends on a canvas, Architecture cannot stop at a whim; it must transform from imagination to tangible reality.

This process brings with it, a set of constraints imposed by structural, climatic, socio-economic aspects, construction methodologies and material properties, amongst others. These constraints call for fine-tuning of the design. The sophistication and elegance used to handle these constraints differentiate a 'building' that poses as a mere visual sculpture in isolation, from 'architecture' that evolves as a response to its context and people.

Matthew Frederick (2007) says, 'being genuinely creative requires something different from conventional, authoritarian control; a loose velvet tether'. The 'velvet tether' possibly represents the constraints that need to be navigated through, during the realization of the project. The central focus of this thesis is to explore how to address some of those constraints, through the design of a school campus for students of music and dance. The program includes practice, rehearsal and classroom spaces for music and dance, administrative spaces and a library. Themes explored as part of the design development process include architectural form, materiality and detailing.

ACKNOWLEDGEMENTS

My sincere thanks to my committee for their guidance and support in the exploration of this thesis project.

Eternal gratitude to my loving family without whose support I wouldn't be here today.

TABLE OF CONTENTS

Introduction	1
Architecture for the Arts	2
A Colonnade	4
Evolution of the structural system	6
The Context	8
The Site	10
The Architecture	12
The Details	26
Conclusion	35
Bibliography	39
Appendix A - List of figyres	41

INTRODUCTION

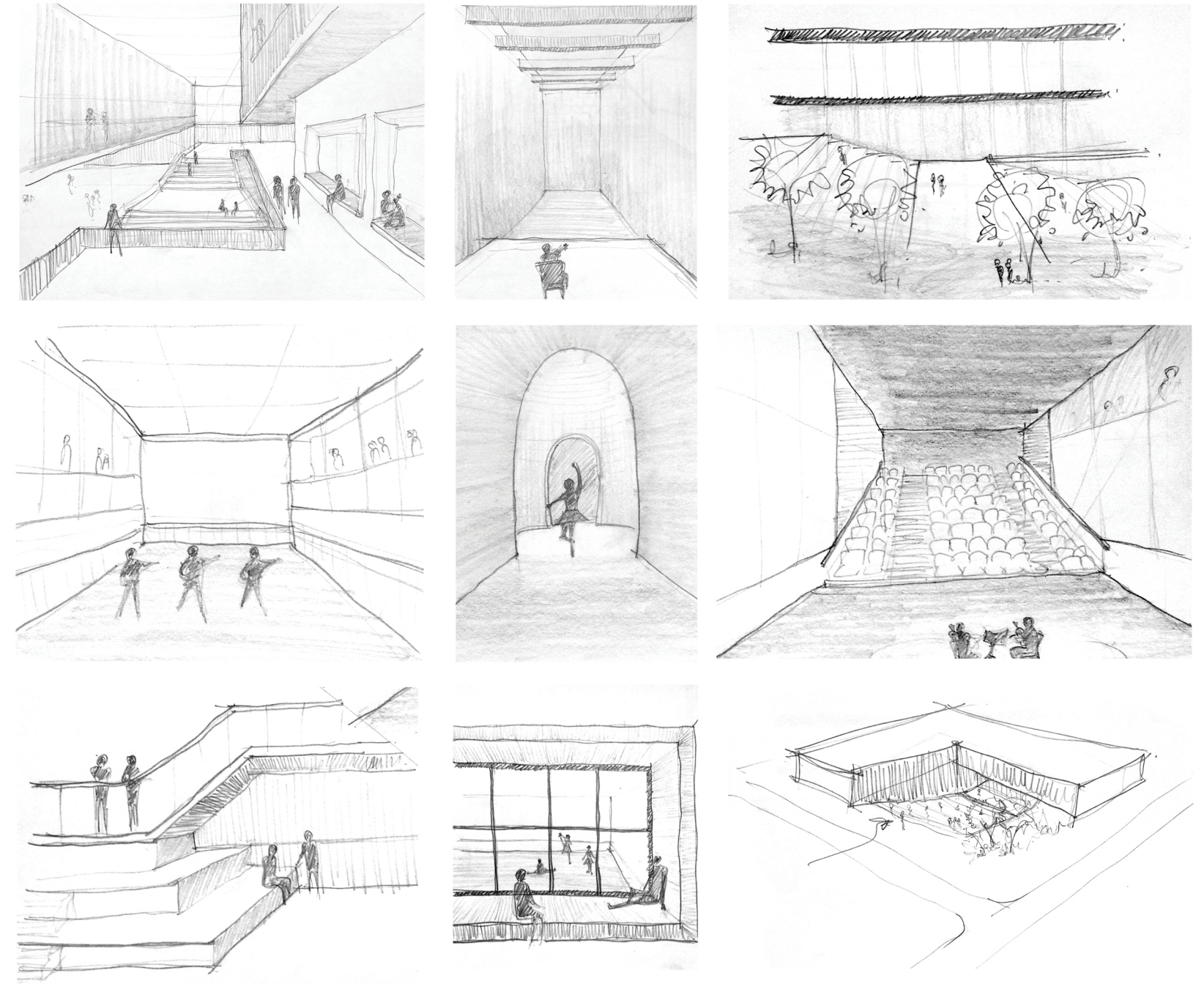
It is often said that 'Writing about music is like dancing about architecture'. The connotation here is that writing, music, dance and architecture are all different languages of self-expression; it would be absurd to try and describe one language in another.

This, however, doesn't mean that music, dance and architecture cannot influence each other. Architecture can undoubtedly play a significant role in the delivery of these arts. The emotions evoked by a moving symphony can be amplified by the quality of the space it is experienced in, just as a beautiful setting enhances the pleasure of watching a dazzling dance performance. After all, dancing is ultimately about inhabiting the space with grace and movement. The reverse is also true - a space gains meaning from the way it is occupied and the activities that that are housed in it.

Given that ambience can so deeply affect the perception of the art that's housed within it, this brings us to questions such as - How do you create a space that inspires creativity? What would be an ideal music and dance campus? What would be unique to such a place compared to a regular school campus? What would comprise an architecture for the arts?

ARCHITECTURE FOR THE ARTS

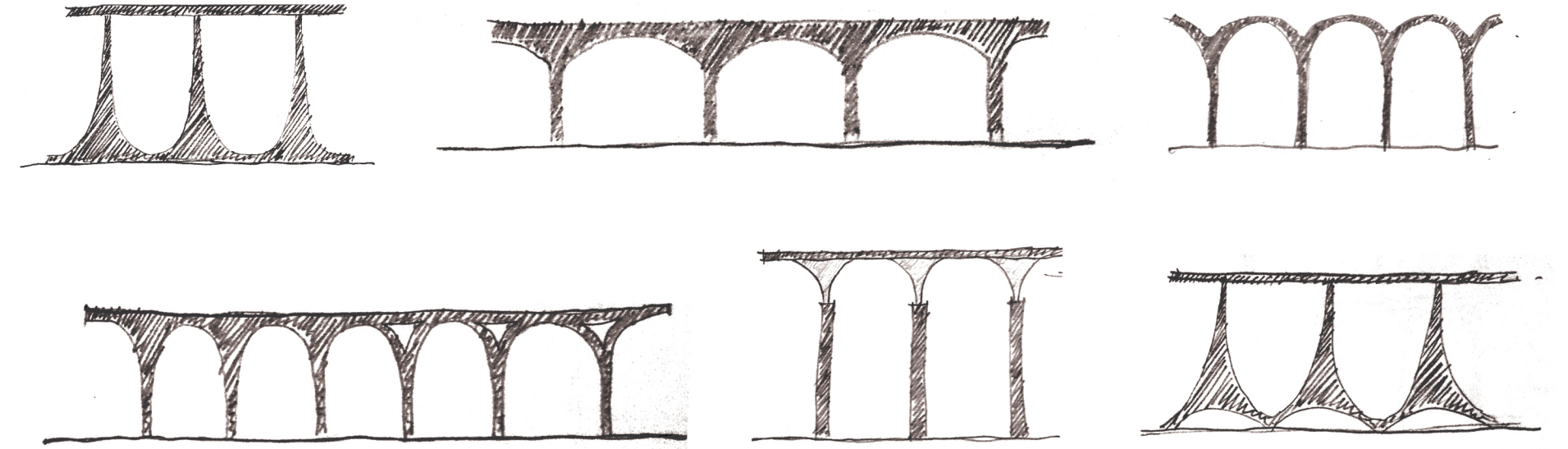
The first step was to imagine the kind of scenes and activities that would be part of the campus. This led to a series of initial sketches that broadly outlined the qualities of spaces that seemed characteristic of a conducive environment for such activities to thrive. Besides formal classrooms and rehearsal areas, there would be informal, flexible spaces that could easily lend themselves to various events from organized group choreographies and demos to impromptu dance-offs in the corridors; from fun spaces to hang out with peers, to quiet, private pockets of spaces for moments of self-reflection. Visual connectivity between multiple levels would allow for quiet observation by passers-by without intrusion. Natural light would wash different spaces differently thereby painting each with a unique ambience. All in all, these were spaces that would beautifully 'stage' or 'frame' the kind of vibrant atmosphere that would surround a campus filled with young musicians and dancers.



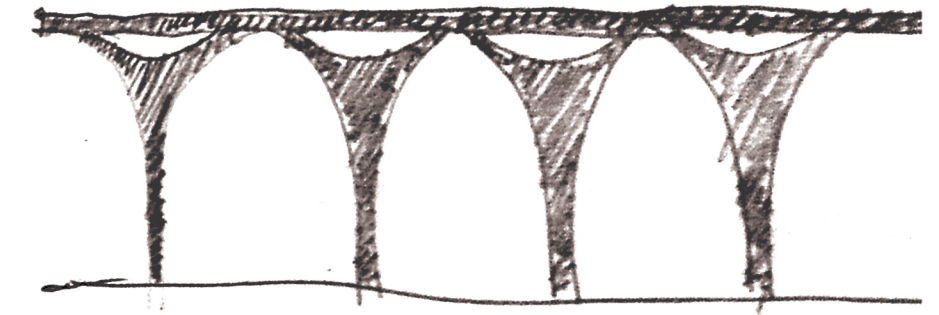
1 Preliminary sketches outlining early design goals

A COLONNADE

The project began to take shape with the design of a single line of columns. In the process of searching for a suitable architectural style, certain qualities associated with music and dance served as sources of inspiration. Rhythm and Movement were two such qualities that could translate well into the architectural language. The sense of Movement is alluded to by the graceful lines of curve in the column's sculptural form, and Rhythm by the act of repetition of the architectural elements.

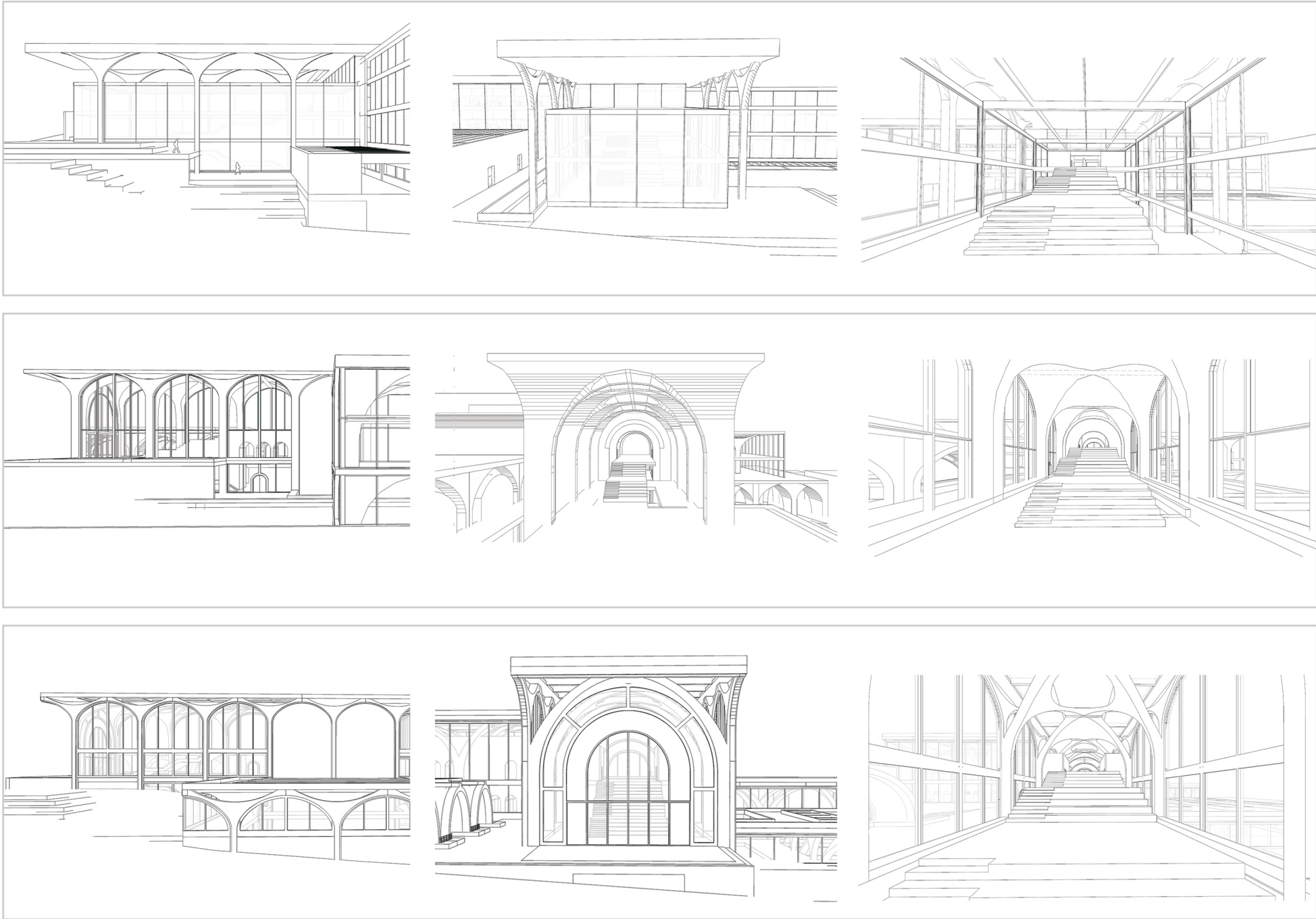


2 Preliminary sketches exploring form of a colonnade



EVOLUTION OF THE STRUCTURAL SYSTEM

The fluidity of the form demanded the use of concrete as the prime structural material. What began as a set of colonnade holding up a flat roof grew, through the project, into a more refined version that addressed structural and material tendencies. The end result was a structural system comprised of a series of concrete double vaults with volumes of material subtracted out, in order to let in natural light and allow visual lightness and delicacy.



3 Evolution of the structural system



THE CONTEXT

Located in Crossroads Arts District near downtown Kansas City, Missouri, the project is set against a unique backdrop of vibrant and rich artistic culture. The neighborhood is home to numerous art galleries, visual artists, designers, architects, advertising agencies, local independent filmmakers, live music venues and one of the country's largest remaining examples of Film Row Districts. Local events like 'First Fridays' and the annual 'Crossroads Music Festival' bring to the scene, outdoor bands and performances, concert performances, short films screening and booths offering apparel by local designers, print media and carnival games.

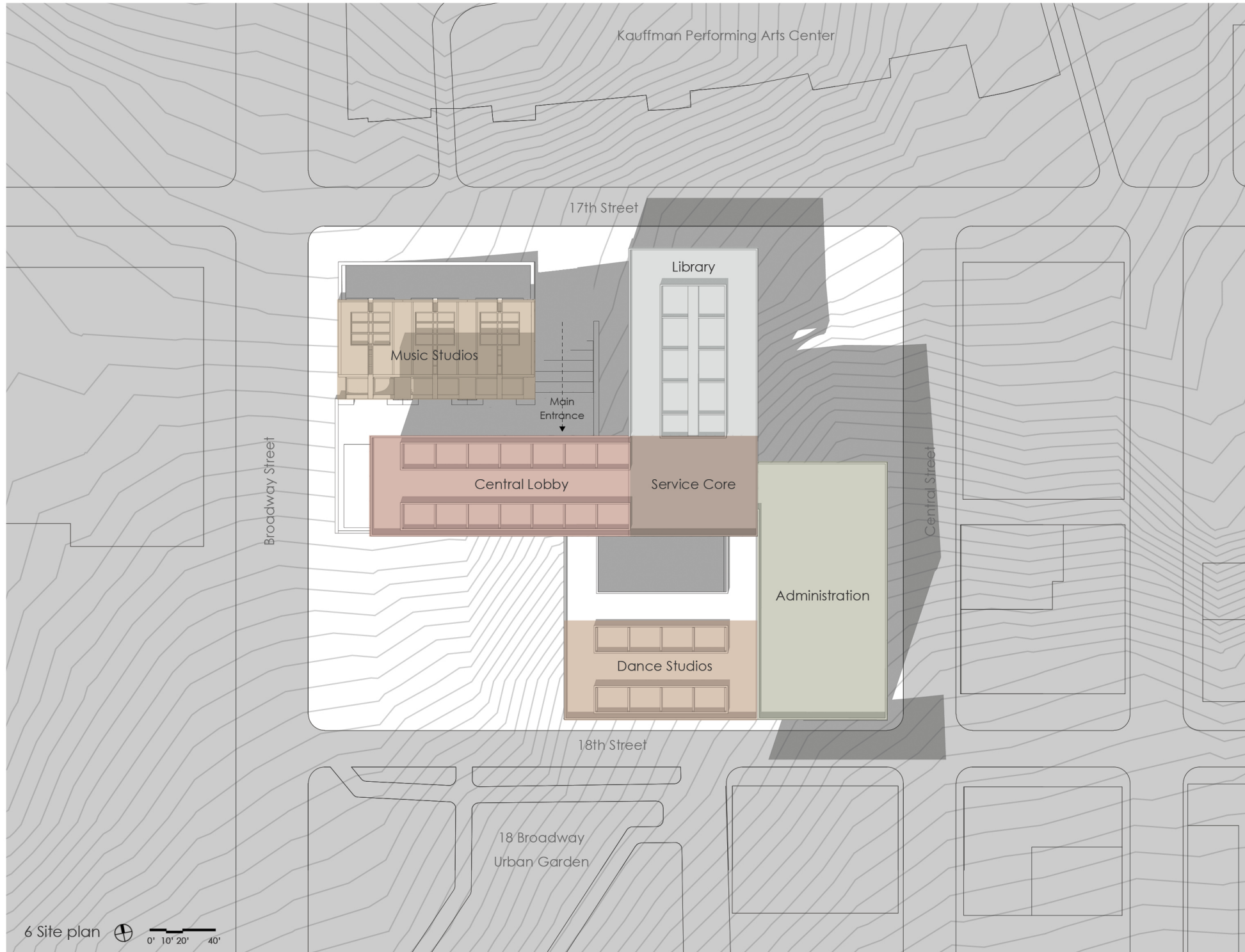
This scope of this thesis project is loosely based on a proposal by The University of Missouri, Kansas City (UMKC), to execute an expansive multi-decade plan for a "Downtown campus of the Arts". Phase 1 of UMKC's plan involves moving the university's conservatory of music and dance. Subsequent phases would involve moving other university based arts programs to downtown as well.

The proposed site and broad program requirements laid down by UMKC have been taken as starting points for this thesis. The actual design of the project presented in this book has, thenceforth, have been developed by the author as part of this thesis.

THE SITE

The proposed site is an entire city block directly opposite to the Kauffman Performing Arts Center in downtown Kansas City, bound by 17th & 18th streets on the North & South and Broadway & Central streets on the East & West. As noted in UMKC's project proposal, the location next to the Kauffman Center will likely provide an excellent ecosystem in which the students will create their careers. A campus close to the emerging cultural district could be mutually beneficial for UMKC and the entire region. Towards the south of the site lies a community garden called '18 Broadway Urban Garden' which is to be used for future phases of the UMKC project. In the interim, the park can serve as an extension of the campus and provide a green space for the students to enjoy and relax in.





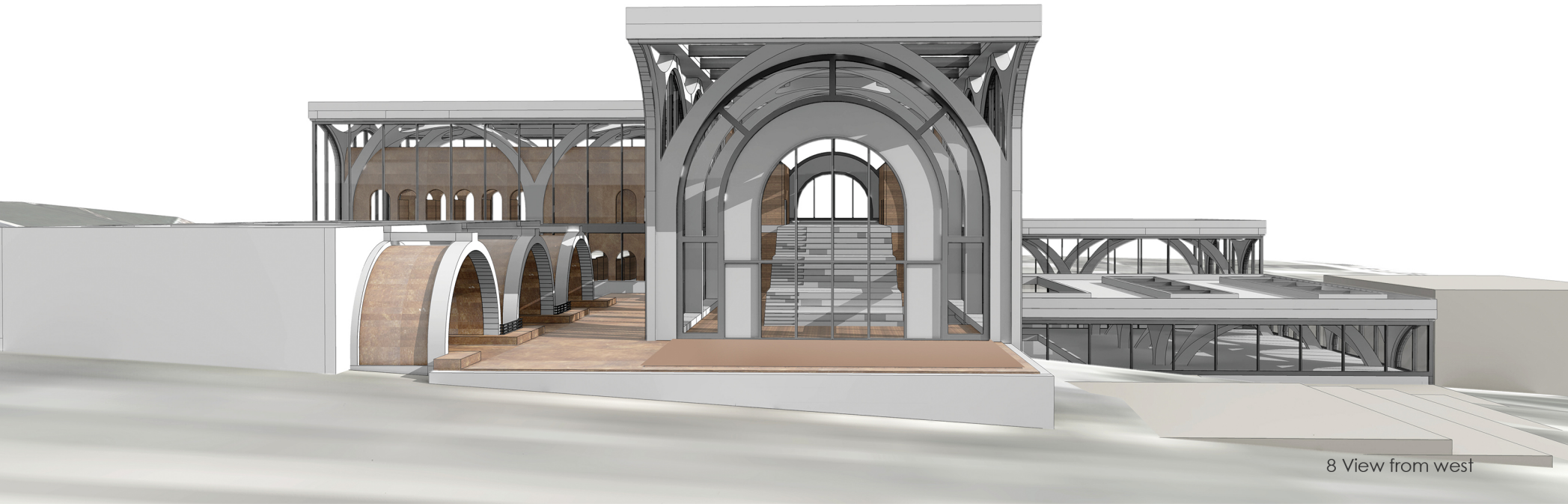
THE ARCHITECTURE

The initial sketches made early on in the design process, represented ideas such as effective staging and framing of various activities, visual connectivity between multiple levels and an architectural style that reflects a sense of rhythm and movement. The spatial organization is aimed at allowing for such moments to occur in various parts of the project.

The main entrance leads to the central lobby that forms a key feature of the building. Natural light streams in from the ceiling height glass walls on the sides and skylights above, while weaving through the delicate concrete framework. The lobby serves not only as a transition space between multiple levels but also as a multipurpose space that can stage informal events. The stairway along the length of the lobby integrates seating areas within itself. The space at the bottom of the stairs can then double as a stage area for informal events. Sliding-folding doors allow the stage area to overflow onto the outdoor. Branching off from the central lobby are music/dance studio spaces, private practice rooms, classrooms, library and administrative spaces. Circulation through the building takes one through corridors that are flanked by semi-enclosed pockets of small, private spaces with seating areas and windows overlooking double heighted music and dance studio spaces at lower levels.

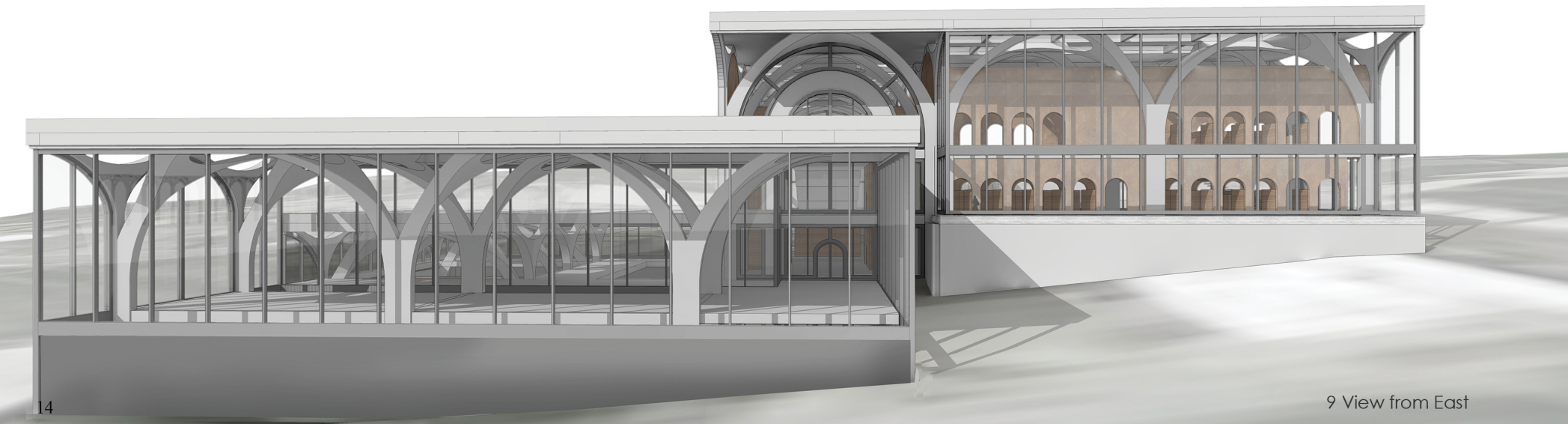


7 View from north towards main entrance



8 View from west

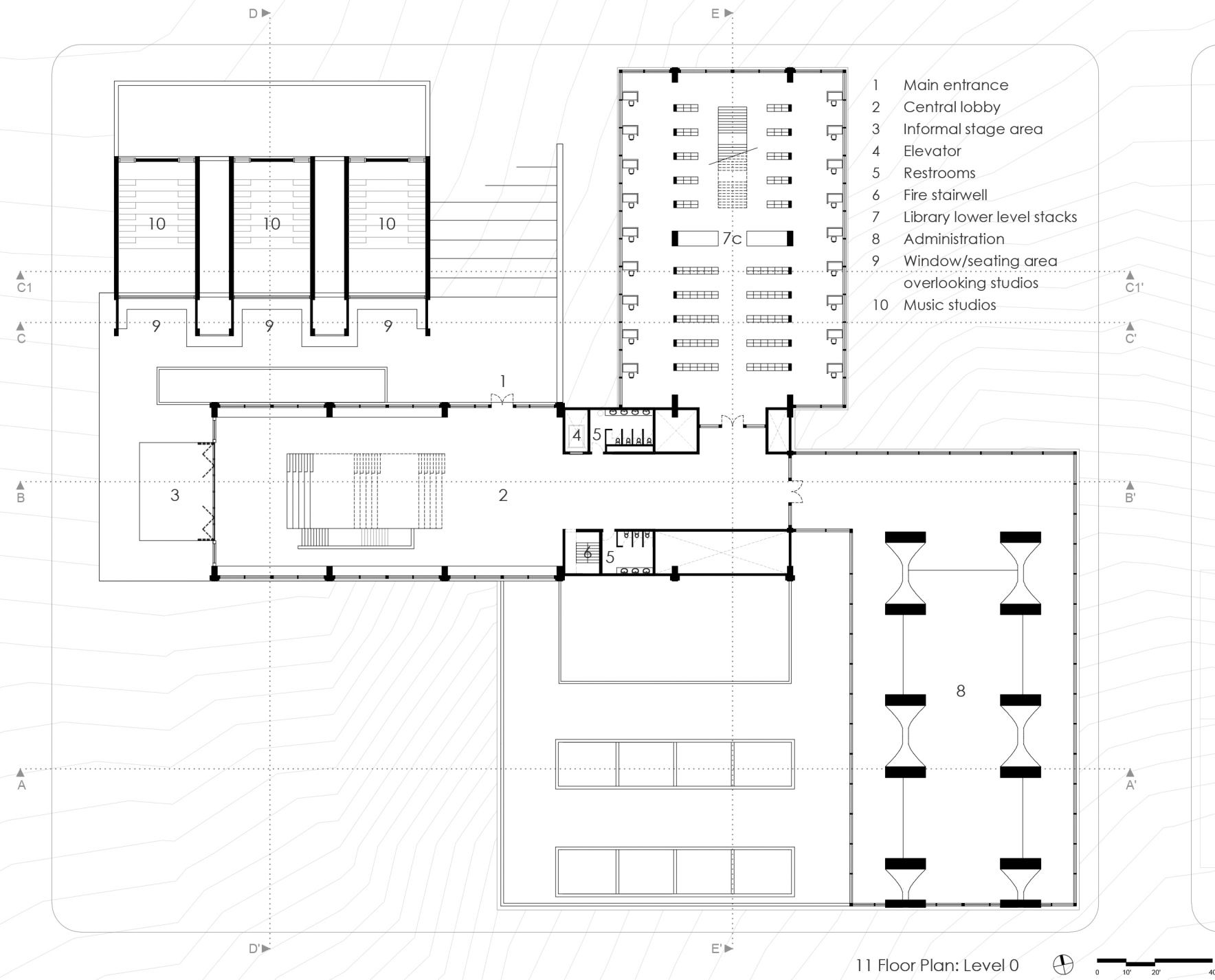
The vaulted concrete structural system as seen in the lobby is extended to other parts of the building as well. Spatial enclosure is formed by wrapping the concrete frame with secondary materials as infill. The secondary materials include glass - steel curtain walls and cola acid-stained concrete for the exterior walls and wood for interior partitions and flooring. Different interior spatial qualities and external elevations are attained for different spaces by varying the kind and degree of enclosure. While the lobby is treated with a glass infill between the concrete columns, the reverse is observed in the case of the library and administrative wings, i.e. in the form of free standing concrete columns in the middle of the overall space enclosed by glass curtain walls.



9 View from East

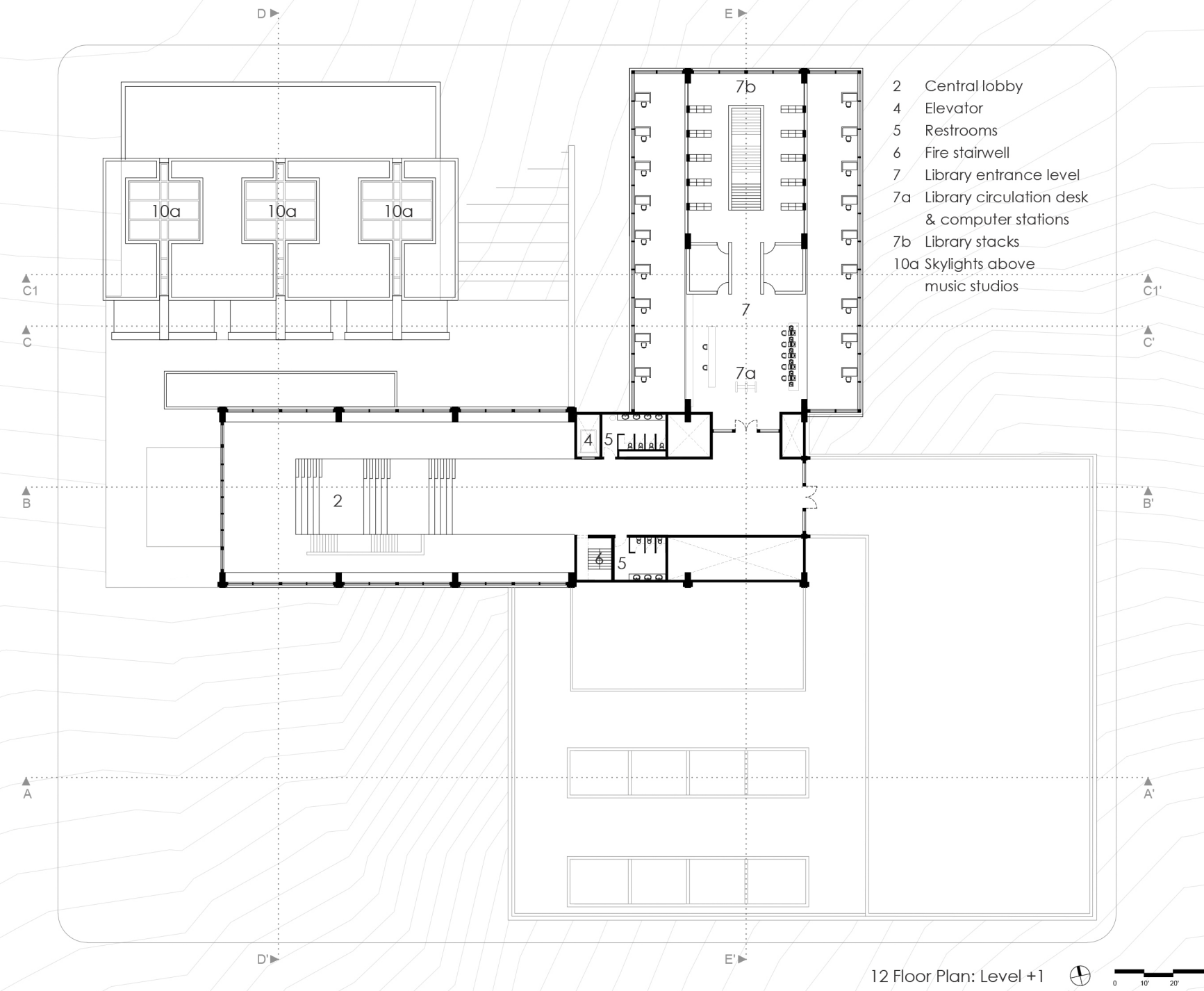


10 View from South



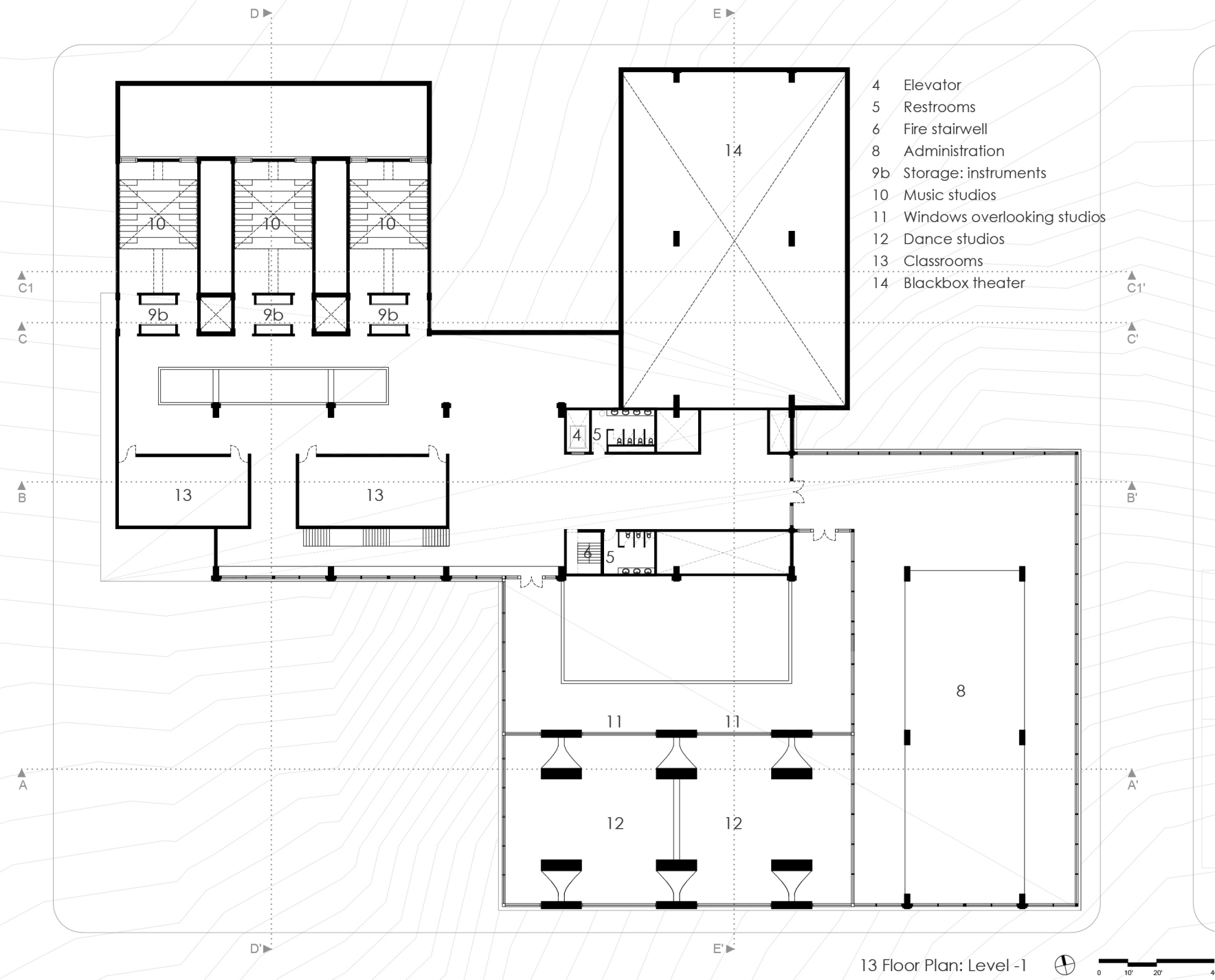
11 Floor Plan: Level 0

- 1 Main entrance
- 2 Central lobby
- 3 Informal stage area
- 4 Elevator
- 5 Restrooms
- 6 Fire stairwell
- 7 Library lower level stacks
- 8 Administration
- 9 Window/seating area overlooking studios
- 10 Music studios

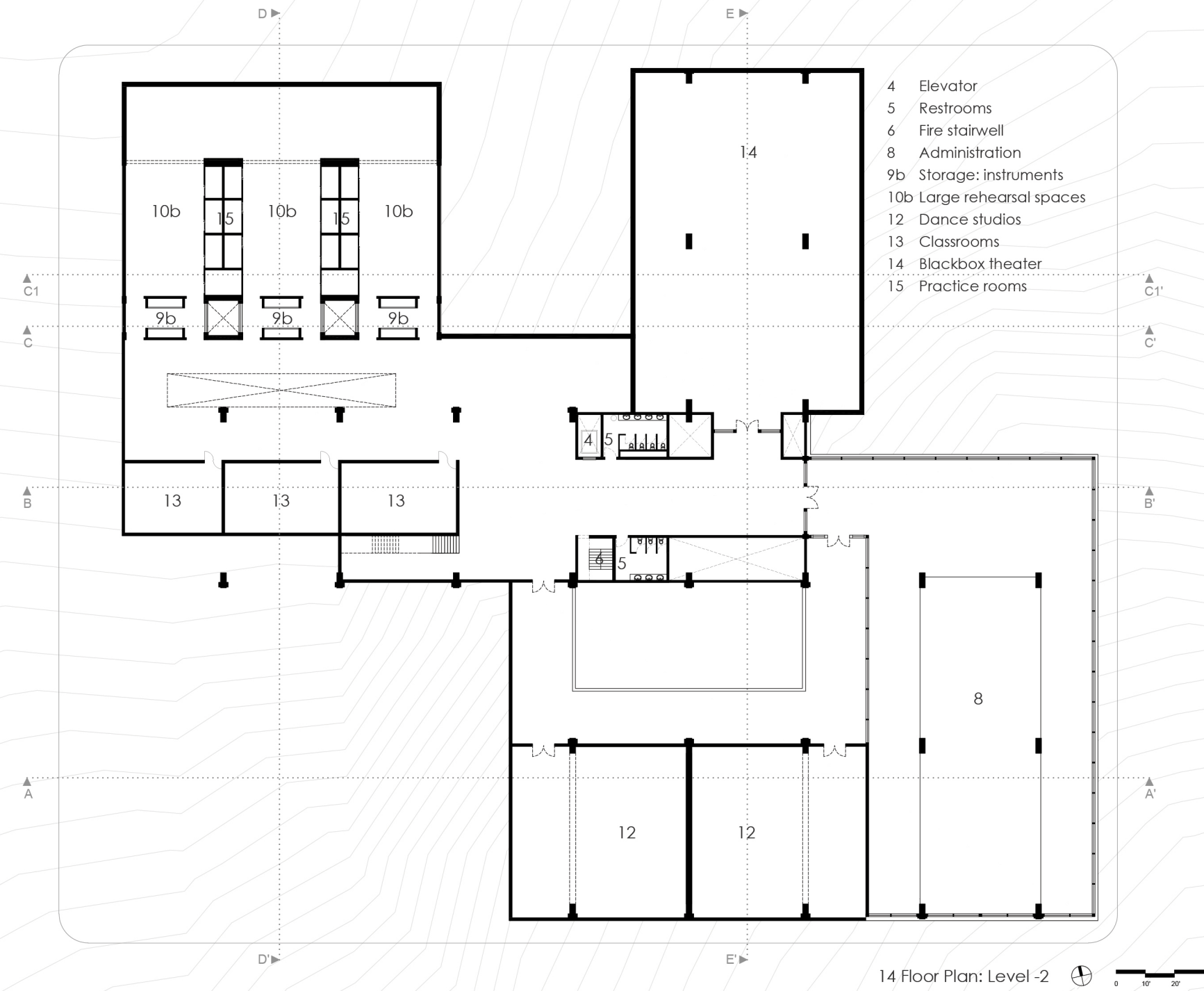
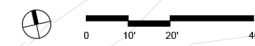


12 Floor Plan: Level +1

- 2 Central lobby
- 4 Elevator
- 5 Restrooms
- 6 Fire stairwell
- 7 Library entrance level
- 7a Library circulation desk & computer stations
- 7b Library stacks
- 10a Skylights above music studios



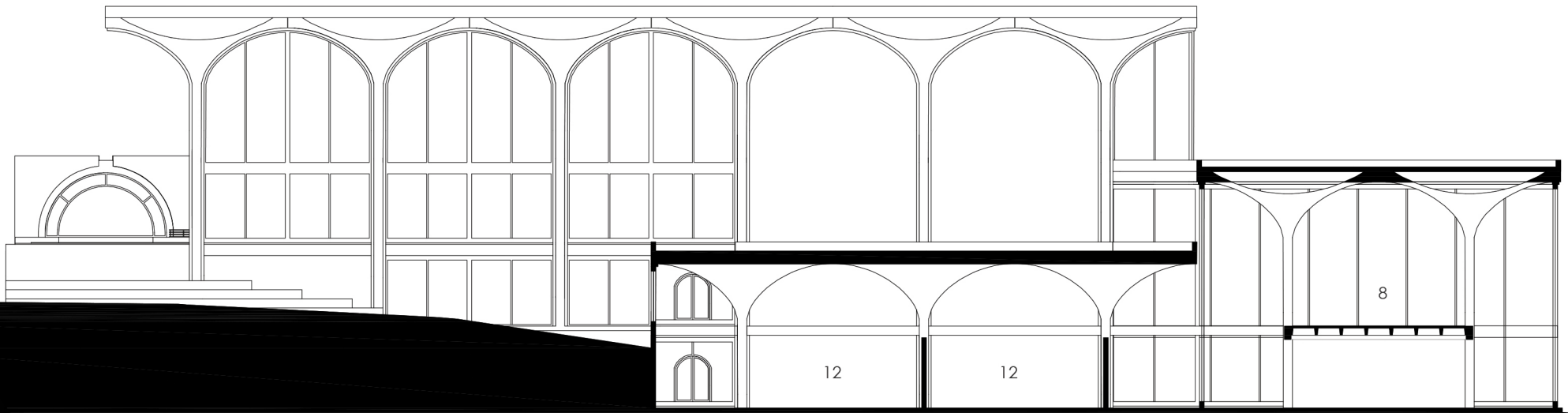
13 Floor Plan: Level -1



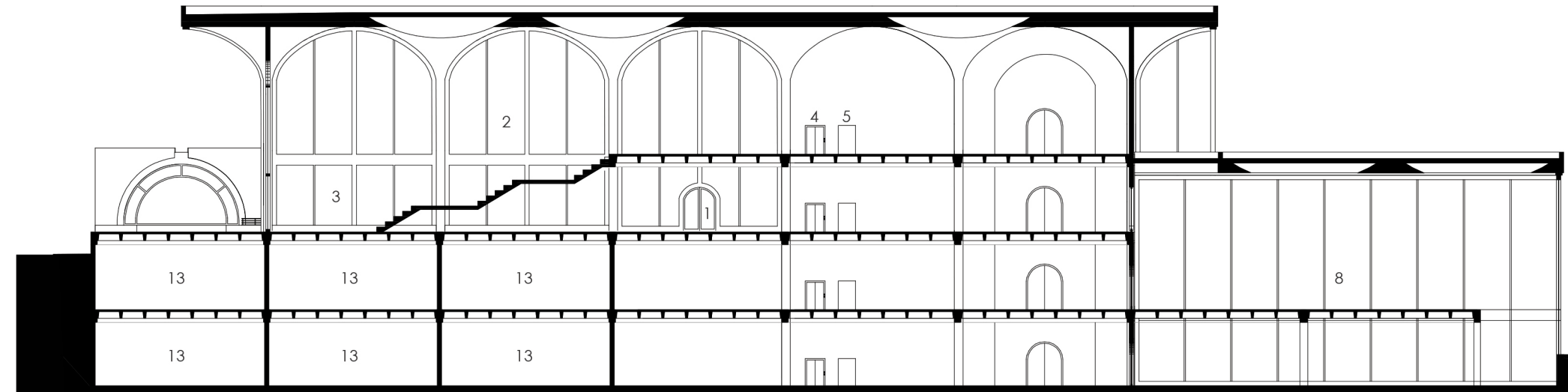
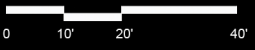
14 Floor Plan: Level -2



- 1 Main entrance
- 2 Central lobby
- 3 Informal stage area
- 4 Elevator
- 5 Restrooms
- 8 Administration
- 12 Dance studios
- 13 Classrooms



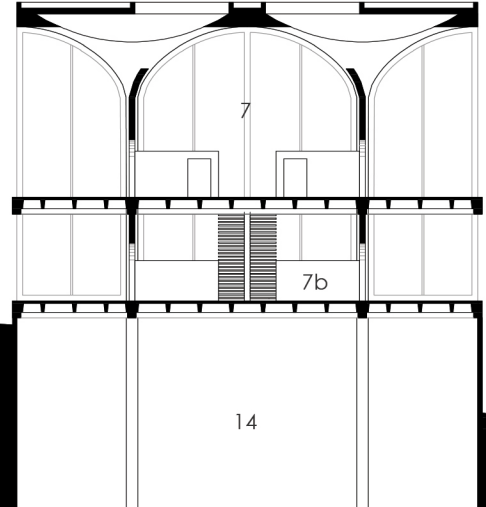
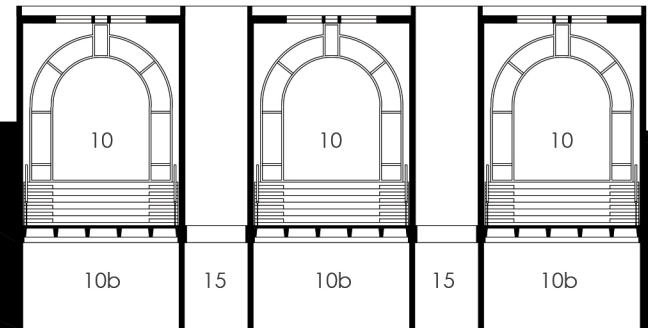
15 Section AA'



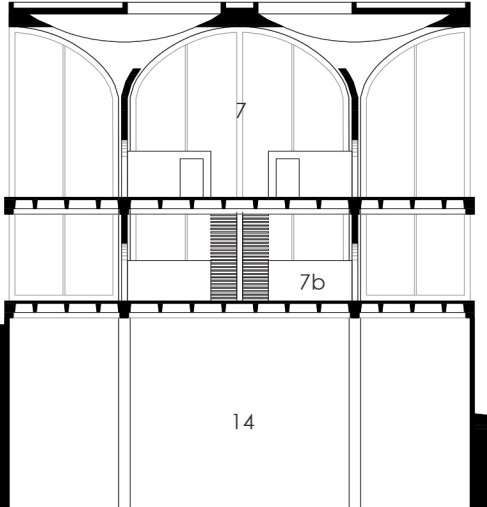
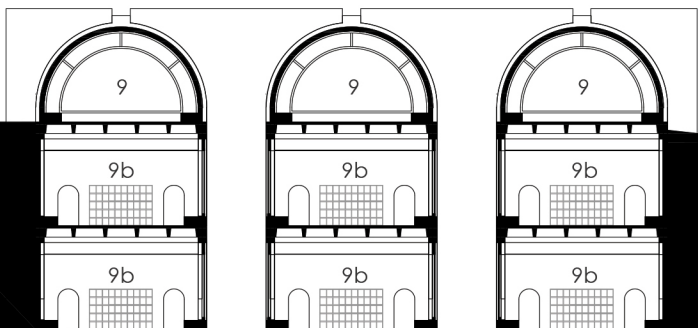
16 Section BB'



- 7 Library entrance level
- 7b Library stacks
- 9 Window/seating area overlooking studios
- 9b Storage: instruments
- 10 Music studios
- 10b Large rehearsal spaces
- 14 Blackbox theater
- 15 Practice rooms

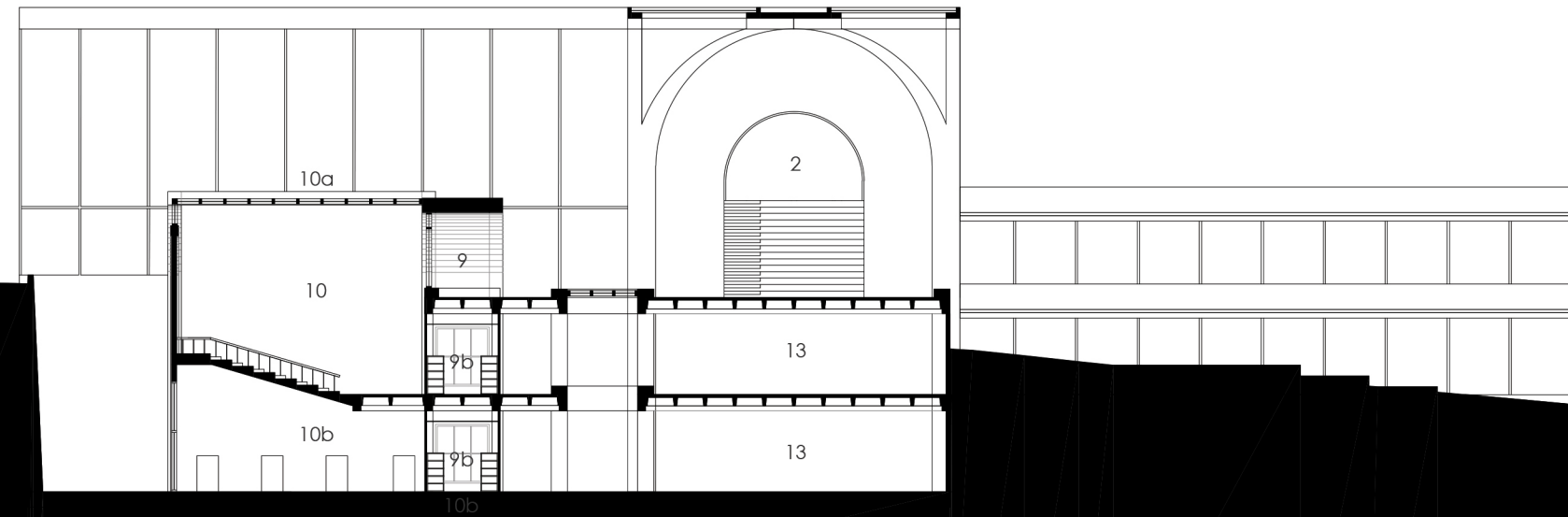


17 Section CC' 0 10' 20' 40'

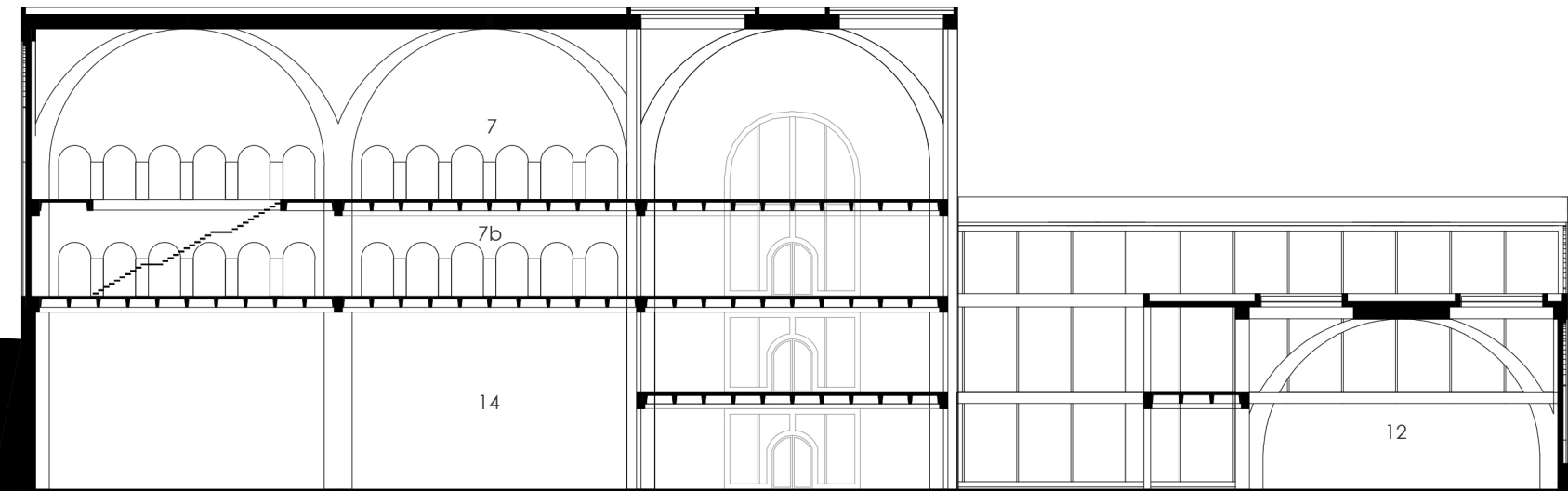


18 Section C1C1' 0 10' 20' 40'

- 2 Central lobby
- 7 Library entrance level
- 7b Library stacks
- 9 Window/seating area overlooking studios
- 9b Storage: instruments
- 10 Music studio
- 10a Skylights
- 10b Large rehearsal spaces
- 12 Dance studio
- 13 Classrooms
- 14 Blackbox theater



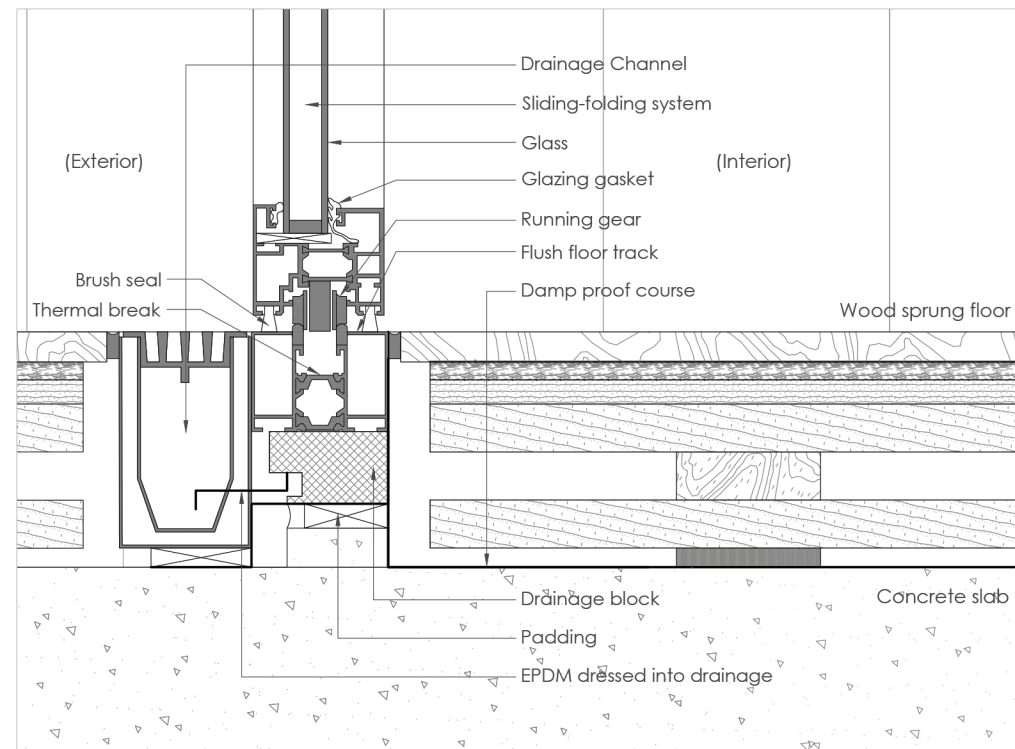
19 Section DD' 0 10' 20' 40'



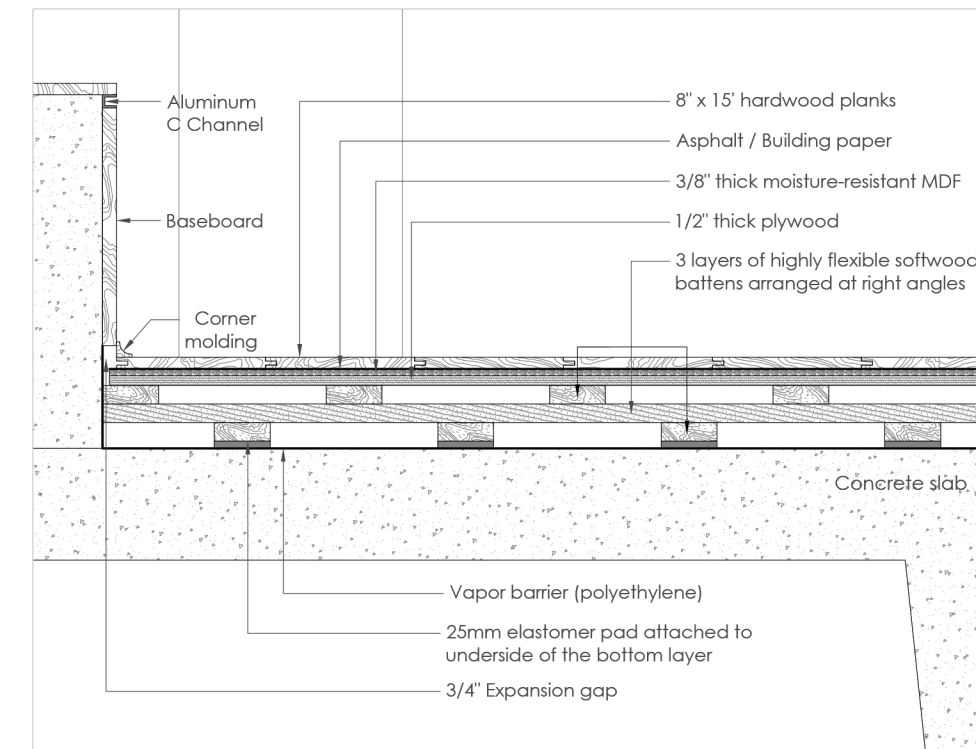
20 Section EE' 0 10' 20' 40'

THE DETAILS

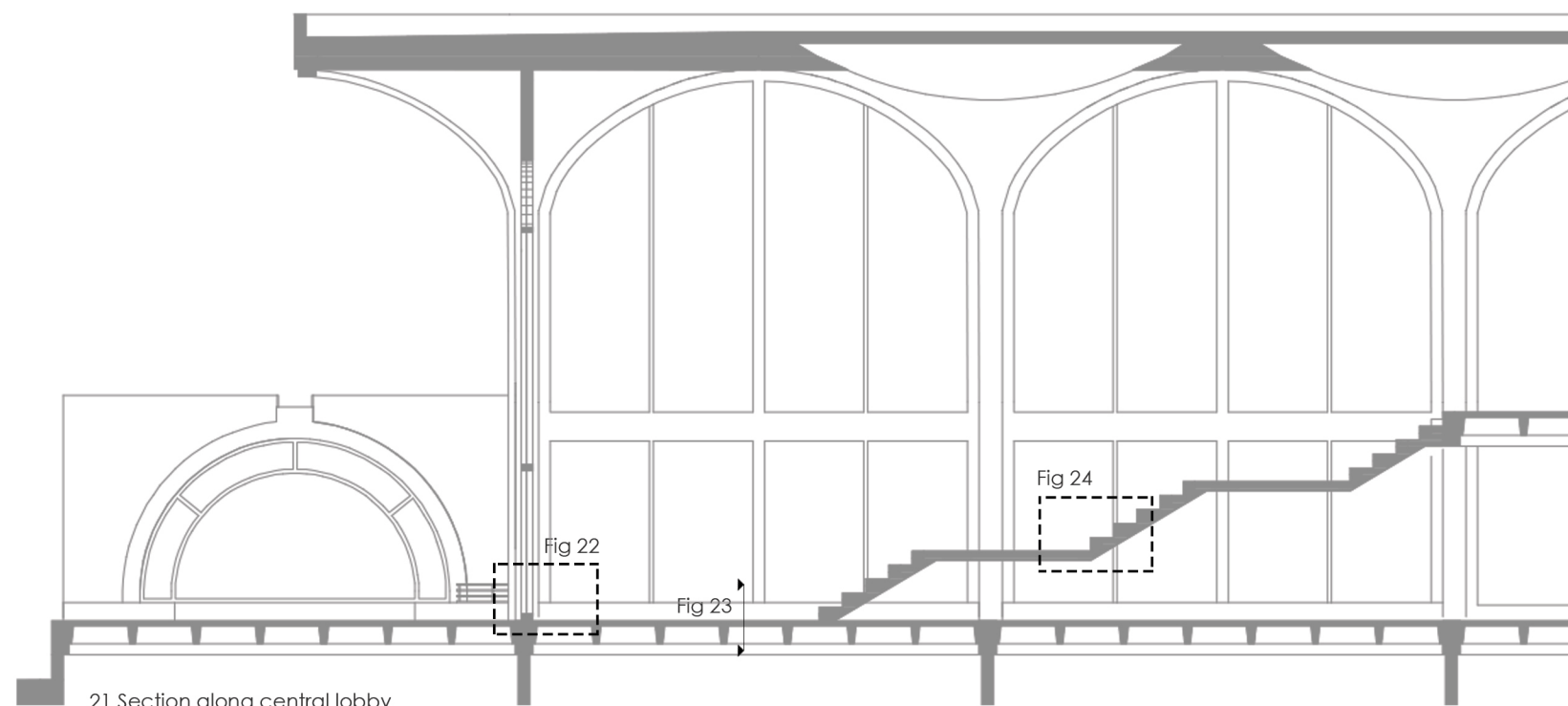
The question of how to deal with the junctions between different materials, components and finishes, is one that every architect encounters in every project. How the architect addresses it, is of utmost importance. Charles Eames emphasizes this point when he said, 'When two materials come together, brother, watch out'. No matter the extent of technological advancements, the statement still holds true. The care and sophistication with which the junctions are dealt with, is what differentiates refined high-level architecture from the ordinary.



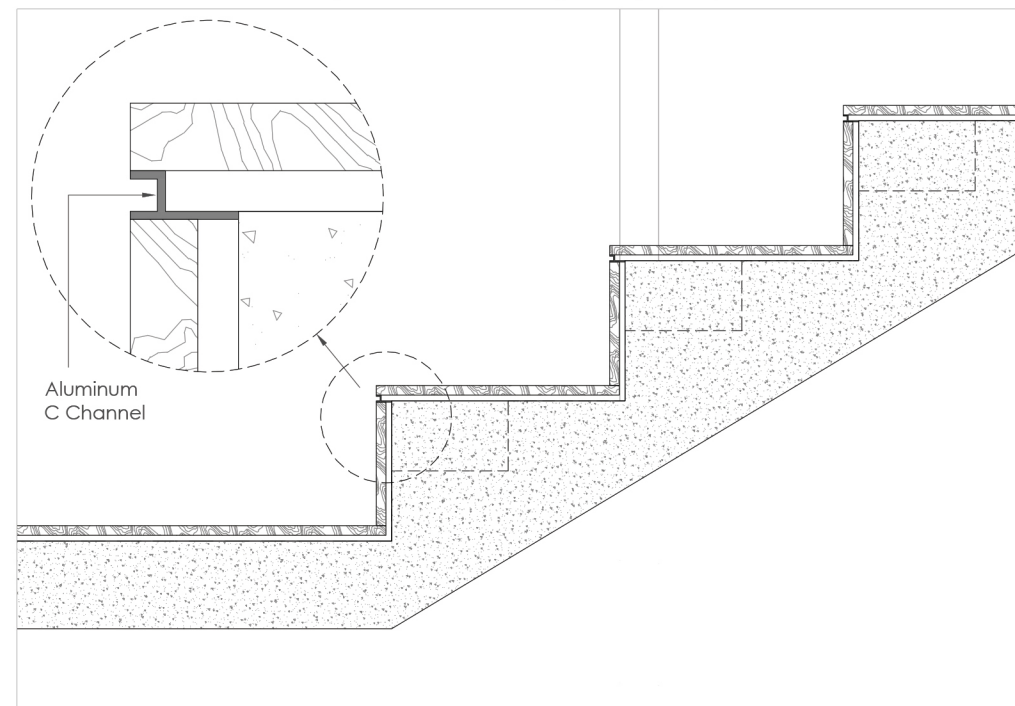
22 Flush floor track & drainage detail for ext. sliding-folding door system



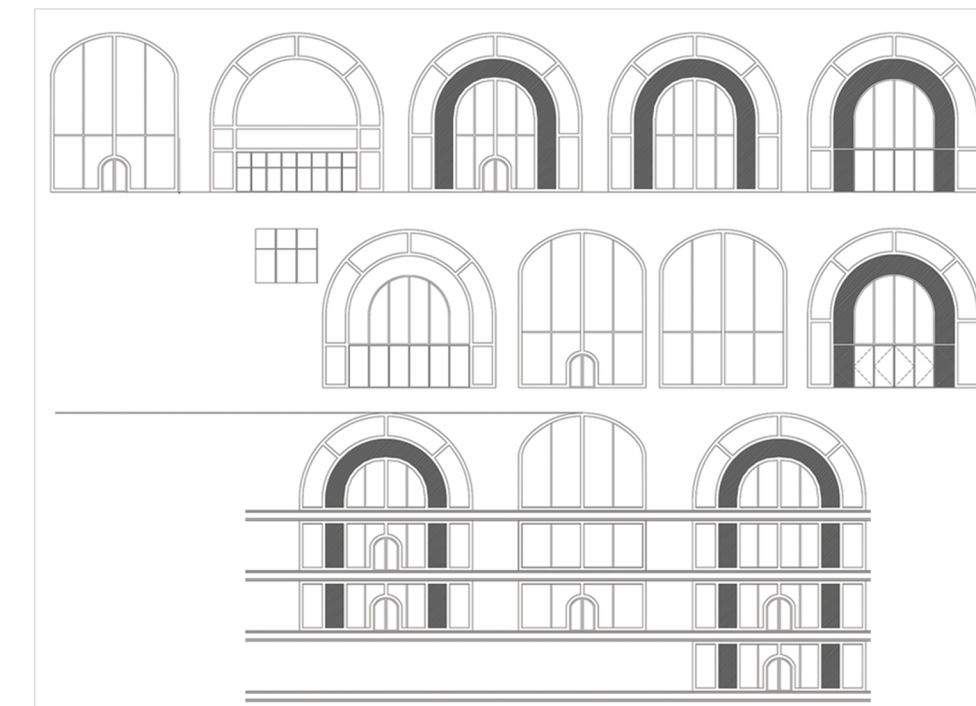
23 'Basket-weave' wood sprung dance floor



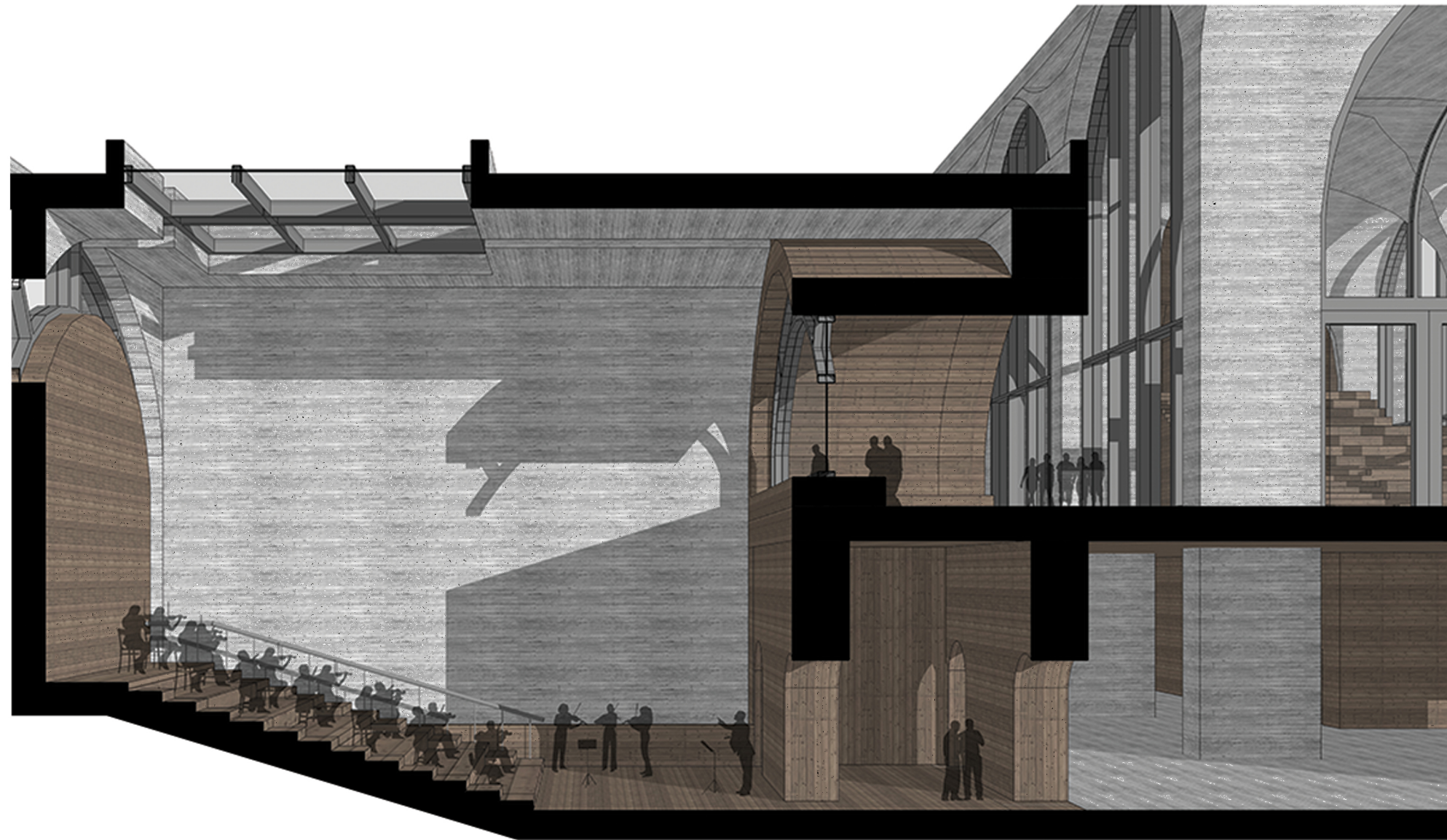
21 Section along central lobby



24 Stair tread-riser detail

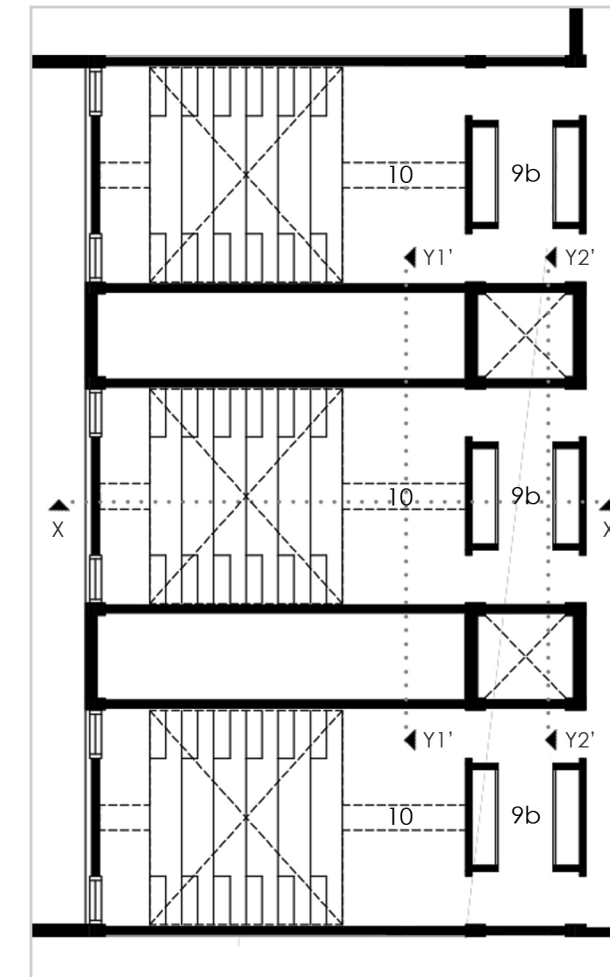


25 Ceiling-height steel-glass panels - elevation study

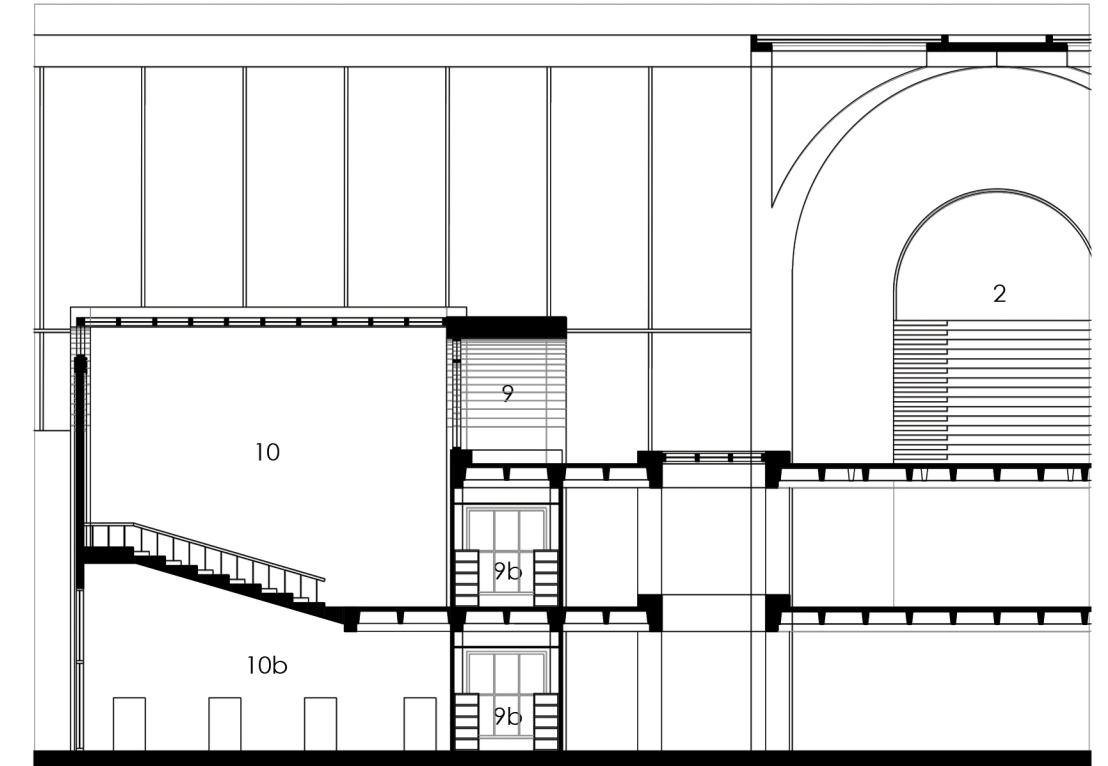


26 Sectional perspective cut through music studio - early iteration

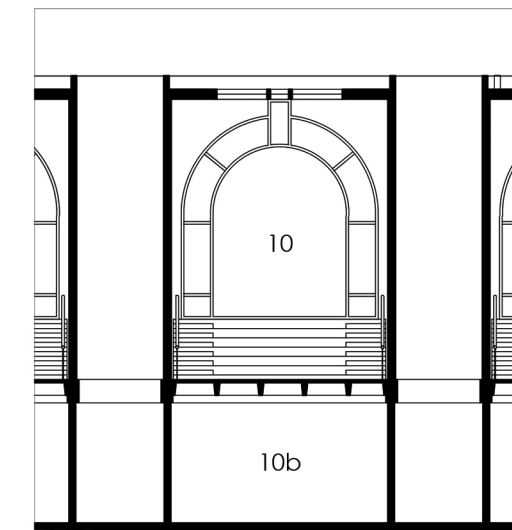
- 2 Central lobby
- 9 Window/seating area overlooking studios
- 9b Storage: instruments
- 10 Music studio
- 10a Skylights
- 10b Large rehearsal spaces



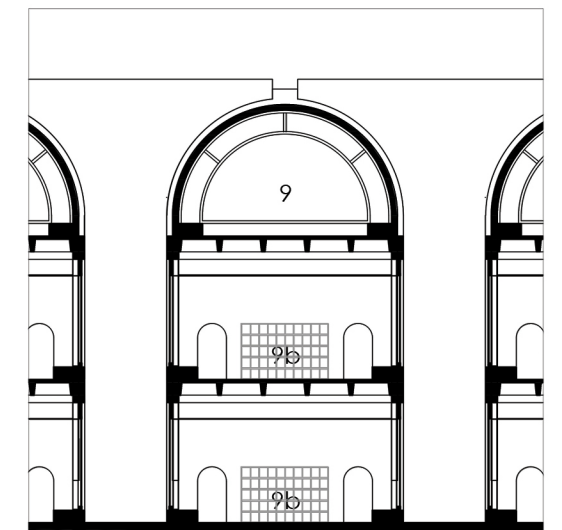
27 Detail - Plan Level (-1) music studio



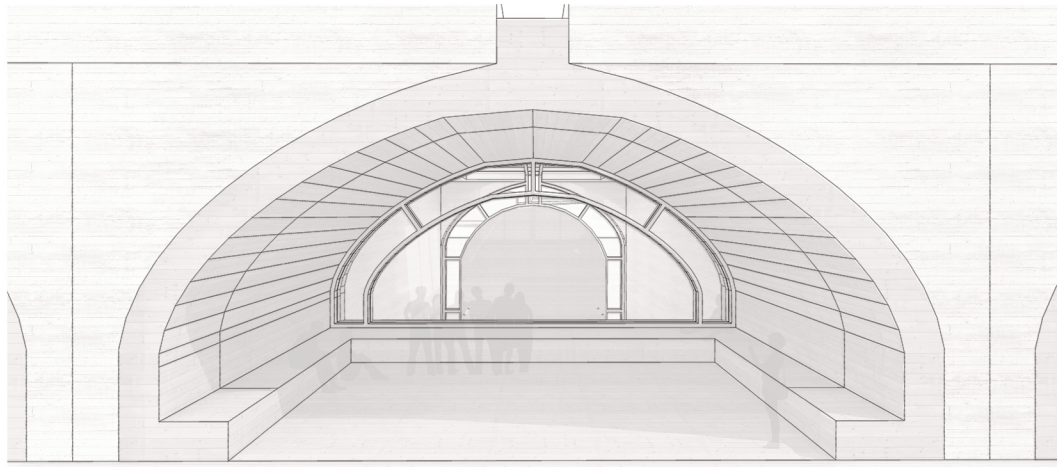
28a Detail - Section XX' - through music studio



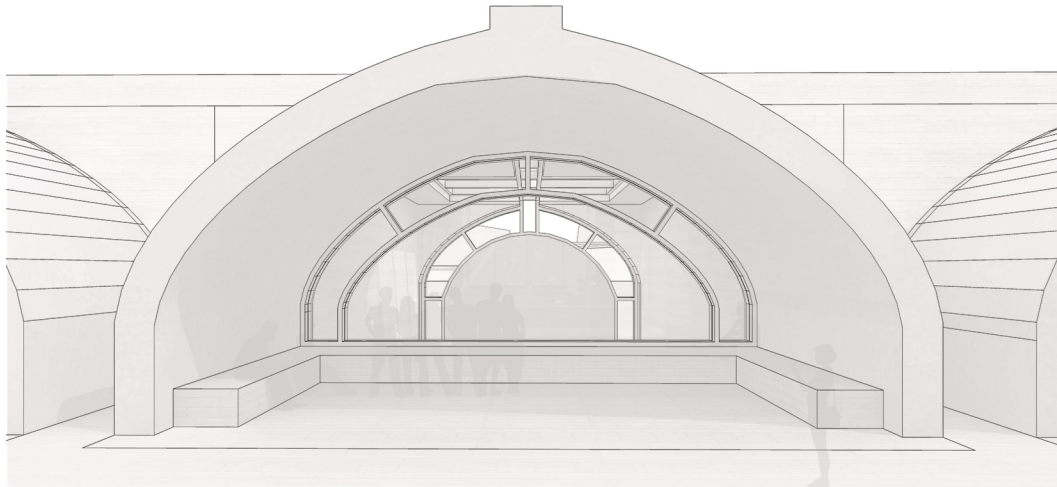
28b Detail - Section Y1Y1' - through music studio



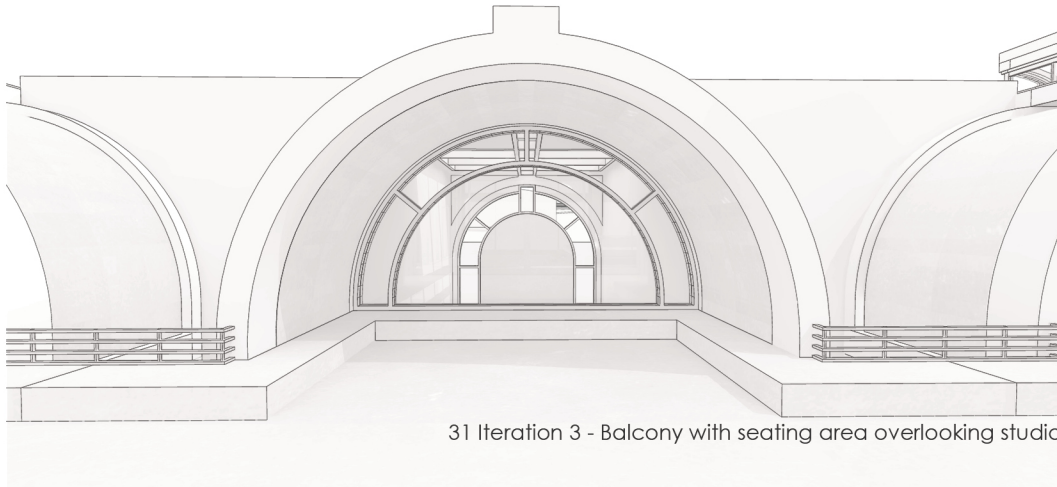
28c Detail - Section Y2Y2' - through balcony & storage



29 Iteration 1 - Balcony with seating area overlooking studio



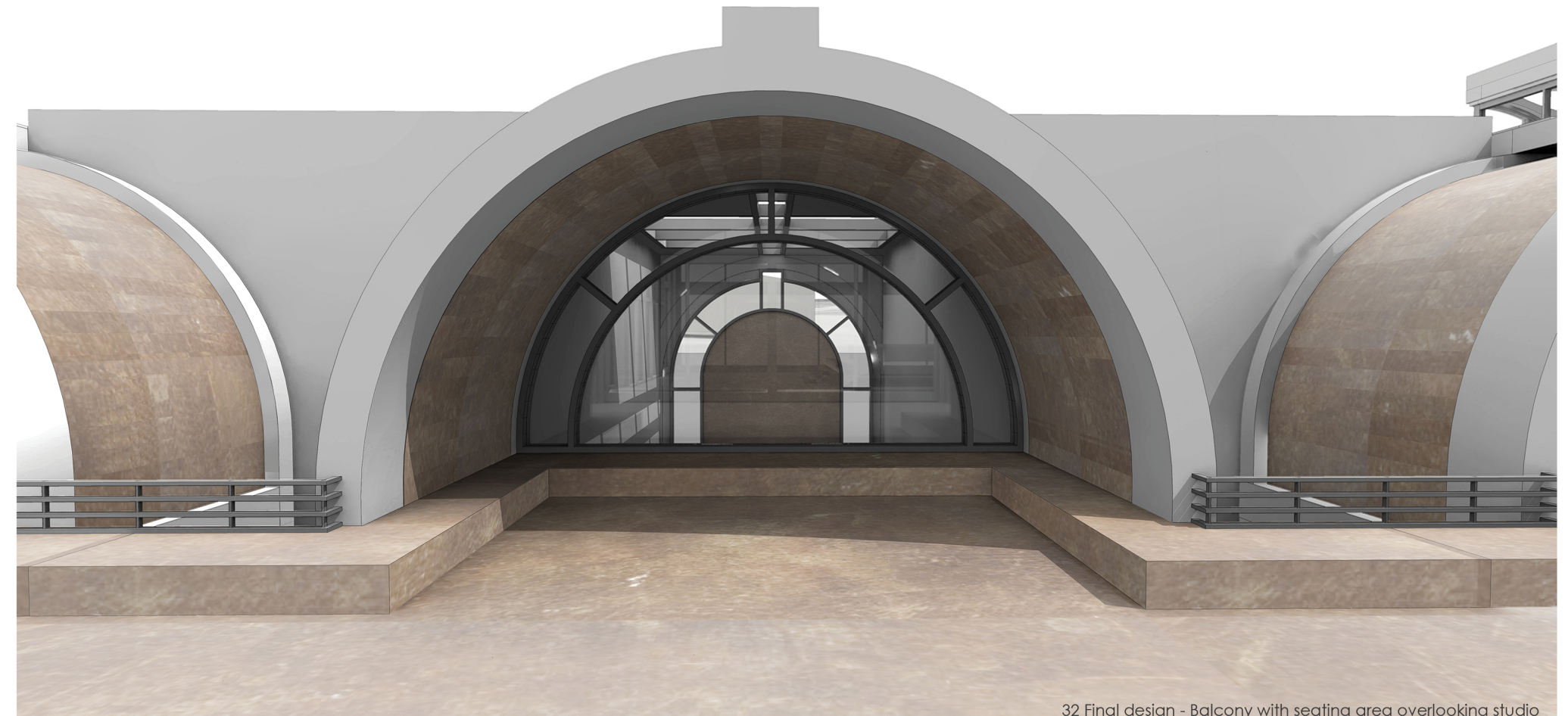
30 Iteration 2 - Balcony with seating area overlooking studio



31 Iteration 3 - Balcony with seating area overlooking studio

Mies van der Rohe's famous dictum, 'God is in the details', concisely captures the essence of this crucial step in architectural design. An ingenious design concept alone will not suffice. Its success depends upon the quality of detailing. Depending upon how one treats the different surfaces, edges and lines, details have the power to enhance or diminish the effect of important design decisions; structural form, tectonics of how the interaction of load and support is expressed, visual balance, symmetry or asymmetry, etc. Details are not just about simply making something work; they serve as opportunities to enhance the clarity with which an observer can perceive the building.

In keeping with the early design concept of allowing visual connectivity between multiple levels, the idea of 'balconies' overlooking the double-heighted studio spaces was explored. The intent was to create cozy pockets of semi-sheltered seating areas from where people can observe the proceedings of the studios below. The design went through many iterations while addressing the question of detailing out how different materials and finishes come together.



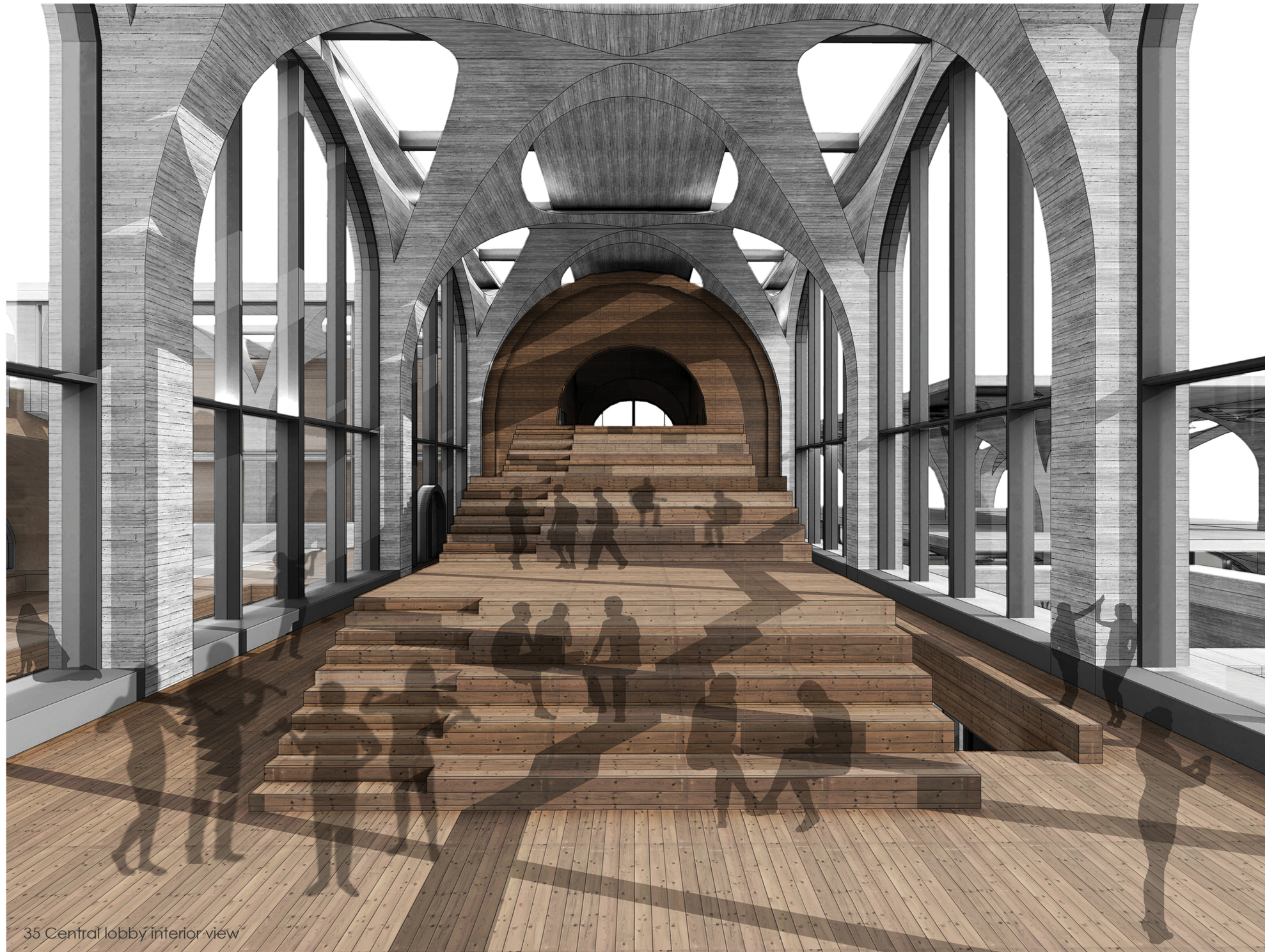
32 Final design - Balcony with seating area overlooking studio



33 Library interior view



34 Central lobby exterior view



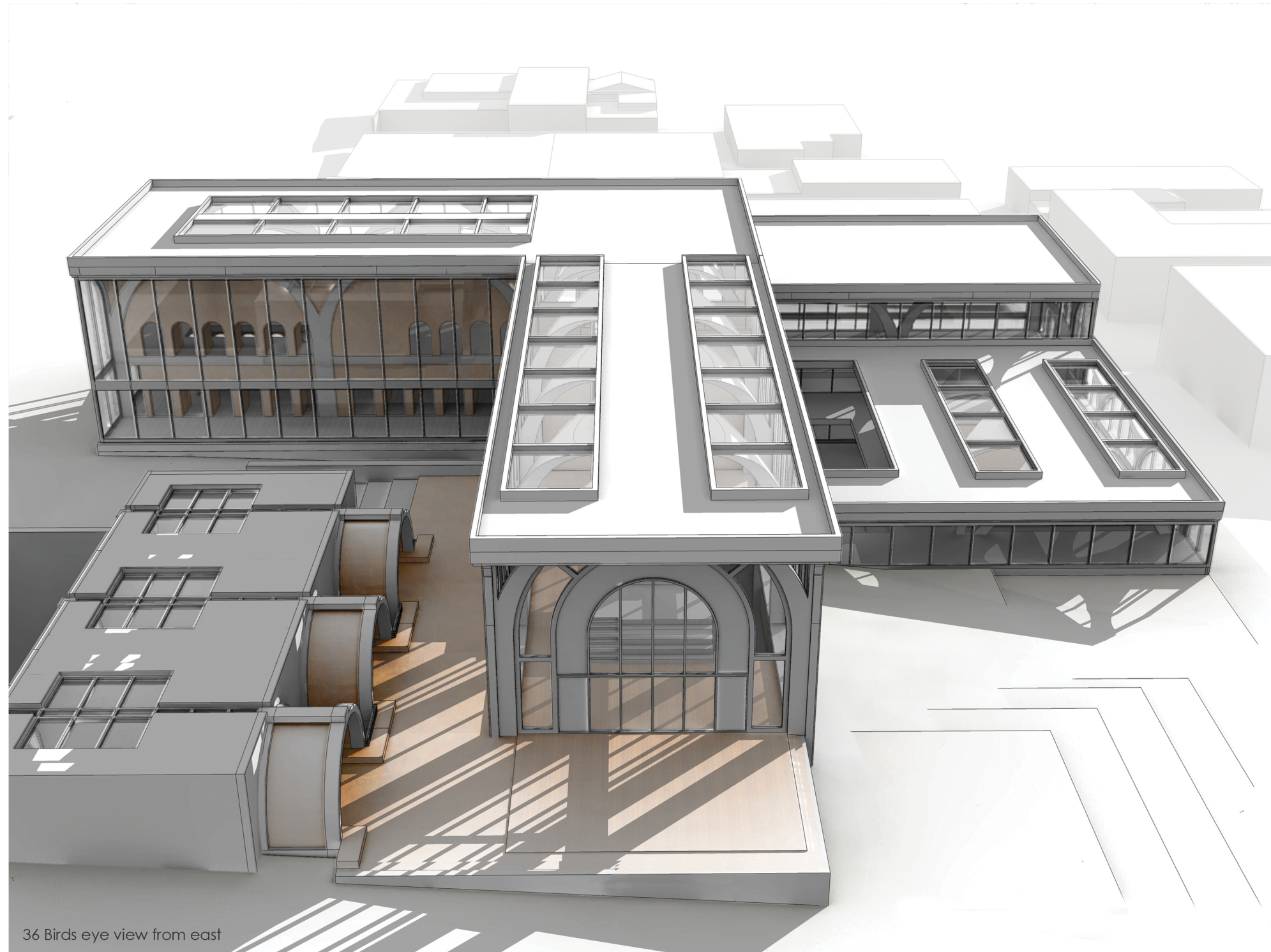
35 Central lobby interior view

CONCLUSION

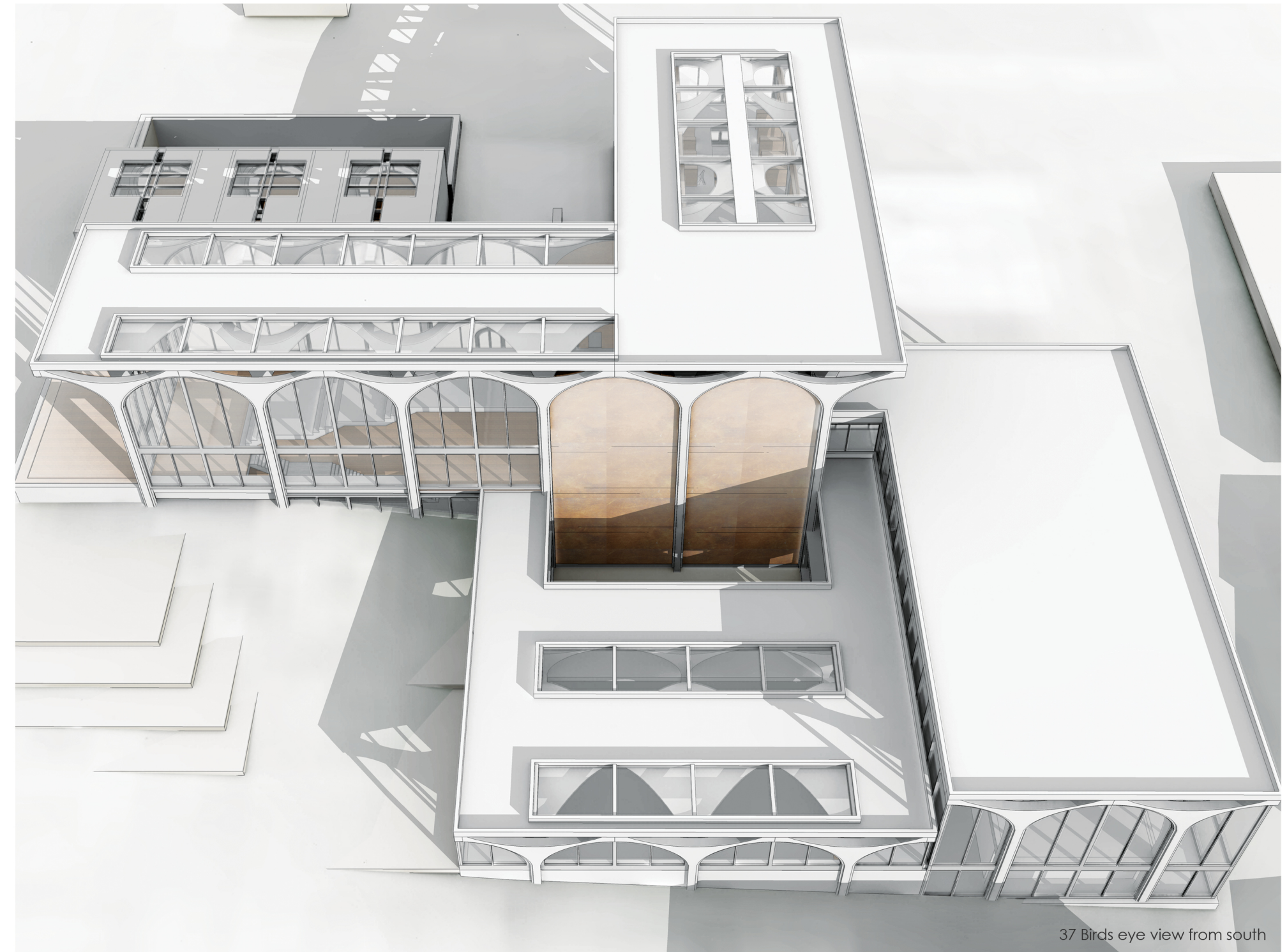
What does the building want to be?

This is arguably the most important and simultaneously the most elusive question, centric to the whole design process. While it may seem like a philosophical question, the answer to it deals with exploring very tangible aspects of design sensibility, material properties and construction methodology. The most successful architectural solutions are the ones that address this question elegantly. In such buildings the existence and nature of each element is often validated by more than one reason. For instance, a column that branches off into multiple members as it meets the ceiling, fulfils not just the structural purpose of load distribution, but the lines, scale and proportions of its form are also informed by the tendencies of its material and the aesthetic judgement of its designer.

Hence, a wooden structure differs vastly from a concrete one. Concrete being a fluid material lends itself more easily to fluid and organic shapes compared to other materials. Wood on the other hand is rigid. The limited size of wooden studs or planks and the stacked, member-by-member nature of the construction leads to a specific architectural character intrinsic to wooden structures. Although, in theory, given the advances till date in the areas of material sciences and technology, one can feign almost any kind of external appearance regardless of the actual structure, such as, a steel frame structure clad to look like brick masonry, or an RCC structure clad with wooden panels. A successful architectural design solution, however, would be one that recognizes and embraces the core nature of the used materials, to create a structure that respects the climatic needs of the site, social needs of the context and the emotional needs of its people.



36 Birds eye view from east



37 Birds eye view from south

BIBLIOGRAPHY

Collison, K. (2014, May 11). Site for proposed UMKC downtown arts campus near Kauffman Center. Retrieved October 9, 2015, from <http://www.kansascity.com/news/business/development/article355245/Site-for-proposed-UM-KC-downtown-arts-campus-near-Kauffman-Center.html>

Frederick, M. (2007). 101 things I learned in architecture school. Cambridge, MA: MIT Press.

Quirk, V. (2013, March 1). How To Make Architecture, Not Art. Retrieved October 6, 2015, from <http://www.archdaily.com/337603/how-to-make-architecture-not-art/>

APPENDIX A

List of Figures

(All images, unless otherwise indicated, are by the author)

1	Preliminary sketches outlining early design goals	21	Section along central lobby
2	Preliminary sketches exploring the form of a colonnade	22	Flush floor track & drainage detail for ext. sliding-folding door system
3	Evolution of the structural system	23	'Basket-weave' wood sprung dance floor
4	The context	24	Stair tread-riser detail
5	Existing site <small>(Source: "Kansas City, Missouri." Map. Google Maps. Google, 7 Oct 2015. Web. 7 Oct 2015.)</small>	25	Ceiling-height steel-glass panels - elevation study
6	Site plan	26	Sectional perspective cut through music studio - early iteration
7	View from north towards main entrance	27	Detail - Plan level (-1) music studio
8	View from west	28a	Detail - Section XX' through music studio
9	View from east	28b	Detail - Section Y1Y1' - through music studio
10	View from South	28c	Detail - Section Y2Y2' - through balcony and storage
11	Floor plan: Level 0	29	Iteration 1 - Balcony with seating area overlooking studio
12	Floor plan: Level +1	30	Iteration 2 - Balcony with seating area overlooking studio
13	Floor plan: Level -1	31	Iteration 3 - Balcony with seating area overlooking studio
14	Floor plan: Level -2	32	Final design - Balcony with seating area overlooking studio
15	Section AA'	33	Library interior view
16	Section BB'	34	Central lobby exterior view
17	Section CC'	35	Central lobby interior view
18	Section C1C1'	36	Birds eye view from east
19	Section DD'	37	Birds eye view from south
20	Section EE'		